Rhodora

JOURNAL OF THE

NEW ENGLAND BOTANICAL CLUB.

Conducted and published for the Club, by

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Vol. 9. October, 1907. No. 106.

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Boston, Mass.
740 Exchange Building.

Providence, R. I.
Preston and Rounds Co.

RHODORA.—A monthly journal of botany, devoted primarily to the flora of New England. Price $1.00 per year ($1.25 to all foreign countries except Canada); single copies 15 cents. Volume 1, $2.00, Vol. 2, $1.50. All remittances by check or draft, except on Boston or New York, must include ten cents additional for cost of collection. Notes and short scientific papers, relating directly or indirectly to the plants of the northeastern states, will be gladly received and published to the extent that the limited space of the journal permits. Forms will be closed five weeks in advance of publication. Authors (of more than one page of print) will receive 25 copies of the issue in which their contributions appear. Extracted reprints, if ordered in advance, will be furnished at cost.

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Subscriptions, advertisements, and business communications to
W. P. RICH, 300 Massachusetts Avenue, Boston, Mass.

Single copies may be had from
E. L. RAND, Corresponding Sec'y N. E. Botanical Club,
740 Exchange Building, Boston, Mass.

Entered at Boston, Mass., Post office as Second Class Mail Matter

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THE NEW ENGLAND BOTANICAL CLUB

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SOME NEW GREEN ALGAE.

F. S. Collins.

(Plate 76.)

The species here noted are only in part from New England localities, but so general is the distribution of plants of this class, that the mere accident of locality of the original station is of little importance; any species of the genera in question is liable to be found in any temperate region.

Pleurococcus marinus n. sp. Cellulis sphaericis, 10–40 μ diam. cum membrana cellulari; membrana 2 μ crassa; colore variante ab auriantiaco intenso ad viridem chlorophyllaceam veram; Reproductione per aplanosporas divisione repitita formatas, 8–64 in cellula; membrana cellulari distincta et admodum crassa dum in cellula matricali; congerie sporarum substantia gelatinosa inclusa, post solutionem cellulae matricalis formam sphaericam diu servante.

Cells spherical, 10–40 μ diam., including cell wall; wall about 2 μ thick; color from deep orange to true chlorophyll green. Reproduction by aplanospores, formed by repeated division, 8–64 in a cell, spore wall distinct and relatively thick while still in the mother cell; mass of spores retaining the spherical form and held in a gelatinous mass long after the disappearance of the mother cell wall.

This plant was distributed through a mass of floating algae in shallow pools in a salt marsh at Stover's Point, Harpswell, Maine, July, 1906. It formed so large a proportion of the mass as to give a brick- or orange-red color to the whole, the other species being *Lyngbya aestuarii* (Mert.) Liebm., *Cladophora expansa* Kütz., and other forms usually found in such localities. It has been distributed as No. 1316 of the Phycotheca Boreali-Americana. The genus *Palmellococcus* was founded by Chodat in 1894,[1] for the single species

[1] Chodat, Materiaux pour servir à l'histoire des Protococcoïdées. Bull. Herb. Boissier, Vol. II, p. 429, 599.

P. miniatus (*Protococcus miniatus* Kütz., *Pleurococcus miniatus* Näg.), which is not uncommon on walls and windows of greenhouses, but whose native habitat is unknown; Chodat reports its reproduction under ordinary circumstances to be by bipartition, rarely quadripartition of the cell; but in culture in pure spring water the contents of a cell is by repeated division sometimes transformed into 16, 32 or 64 spores with delicate membrane, escaping in a mass with a gelatinous envelop. This latter form of reproduction is the only one observed in *P. marinus*, but practically all of the Harpswell material seemed to be in some stage of this process. The color of the cell ranges from deep orange to pure green; the largest cells were green, but cells of this color were found of all sizes down to the smallest. The only distinction other than color was that the largest green cells had a thinner wall than the small or moderate sized cells, either green or orange, and that the colored cells seemed more active in spore formation. The wall of the spore was fully developed while the wall of the mother cell was still perfect; after the disappearance of the latter the spores remained in a spherical gelatinous mass for a long time, until they had increased very materially in size; colonies of 32 cells were observed, retaining the spherical form with a diameter of 100 μ. Some of the plant was kept alive for several weeks, but not under the normal conditions of a salt marsh pool; in this material were finally found numerous spherical colonies, in which the contents of each cell had divided into aplanospores of a second generation, much smaller than any noticed in the normal condition of the plant. From *P. miniatus*, *P. marinus* is distinguished by the larger cells, those of *P. miniatus* being 3–15 μ diam.; by the thicker walls of the aplanospores, and by the totally different habitat. According to the figures of *P. miniatus* in Chodat's Algues Vertes de la Suisse, fig. 80, the gelatinous vesicle of the spores is less regular in form in that species and less persistent.

Chaetomorpha Chelonum n. sp. Filamento erecto, stricto, 12–20 μ diam. ad basin, superne incrassato, usque ad 35 μ in fronde sterili; cellula basali ad 1 mm. longa, cellula proxima ad 10 diam., cellulis superioribus 2–3 diam. longis; membrana cellulari crassa; cellulis fertilibus in parte superiori filamenti ortis, ad 50 μ diam., 1–4 diam. longis, leviter aut admodum moniliformibus aut enim subglobosis; zoosporis per aperturam in media parte cellulae et tubum tenuissimum exeuntibus; ramis pluricellularibus, coralloideis, e cellula basali exeuntibus, stratum basale continuum substrato arctissime adhaerentem formantibus.

Filaments erect, straight, 12–20 μ diam. at base, increasing in size upwards, to 35 μ in the upper part of the vegetative plant; lower cell up to 1 mm. long, next cell up to 10 diam. long, upper cells 2–3 diam.; walls thick; fertile cells in upper part of the filament, up to 50 μ diam., 1–4 diam. long, from slightly moniliform to nearly globular; zoospores escaping by an opening near the middle of the cell, through a very short tube; basal layer a dense mass of very irregular, pluricellular, coralloid branches, forming a dense and continuous expansion on the substratum. On the backs of the turtles, *Chrysemys marginata* and *Aromochelys odorata*, Walnut Lake, Oakland County, Michigan, *Dr. T. L. Hankinson.*

Species of *Chaetomorpha* are abundant in all seas, but very unusual in fresh water, the only species which can be considered as well known being *C. Herbipolensis* Lagerh.,[1] which was found in a hothouse in a botanical garden, the place of its origin being unknown. *C. Henningsii* Richter [2] occurring in fresh water near Berlin, is uncomfortably near the marine *C. aerea*, which is said to be found occasionally in fresh water. The present species seems to be amply distinct from *C. Herbipolensis*, by the smaller diameter, longer basal cell, and especially by the strongly developed basal layer, that of *C. Herbipolensis* being merely an outgrowth from the membrane, while in the present species there are distinctly branching, pluricellular filaments, which unite to form a practically continuous layer on the substratum, the shell of the turtle. The basal developments of the individual plants are so closely united that the appearance is that of a continuous membrane, from which arise numerous erect, bright green, straight filaments, pretty uniformly increasing in size from the base to the apex. The cell wall is thick, in the lower cell about one quarter the diameter; the cells in the vegetative filaments are nearly cylindrical, but the fertile cells are strongly swollen, sometimes nearly globular. The material examined having been preserved in formalin, nothing can be said as to the finer details of the zoospores, but evidently large numbers are formed in a cell. Emptied cells showed plainly an aperture near the middle, the cell wall extending as a very short tube, much like that shown for *C. Herbipolensis*, Pl. IX, fig. 5. Two lots of material were received from Dr. Hankinson, one having grown on *Chrysemys*, the other on *Aromachys*; there was some difference between the two, the former having basal cells longer and more slender than the latter, and fertile cells more distinctly swollen.

[1] G. Lagerheim, Ueber die Süsswasser-Arten der Gattung Chaetomorpha Kütz. Ber. Deutsch. Bot. Ges., Vol. V, p. 185, 1887.

[2] P. Richter, Hedwigia, Vol. p. 70, 1893.

Lagerheim, l. c., p. 201, suggests that fresh water *Chaetomorpha* species should be expected in the United States, especially in Massachusetts, as the algal flora here has an almost tropical character. This characterization, which hardly seems to harmonize with the weather of the past winter and spring, was based on his inspection of desmids from Tewksbury. The occurrence of a fresh water *Chaetomorpha*, even farther north than Tewksbury, is of interest.

Cladophora (Aegagropila) amphibia n. sp. Filamentis inferioribus contortis; cellulis forma et magnitudine inaequalibus, subcylindricis, 2–5 diam. longis, 40–70 μ diam., aut 1–2 diam. longis, ad 100 μ diam. in parte media incrassatis; filamentis abunde et irregulariter ramosis, ramis similibus, filamentis ramos erectos etiam gerentibus, 30–50 μ diam., cellulis 4–8 diam. longis, subcylindricis at plus minusve irregularibus, paucos ramulos breves patentes emittentibus; cellula terminali obtusa vel truncata; rhizoidis incoloribus interdum a cellulis inferioribus ortis.

Lower filaments contorted, cells of irregular form and size, subcylindrical, 2–5 diam. long, 40–70 μ diam., or 1–2 diam. long, swollen to 100 μ diam. in the middle, freely and irregularly branched, branches of similar character; also bearing erect branches, 30–50 μ diam., cells 4–8 diam. long, subcylindrical but somewhat irregular, bearing a few mostly short and patent branches; terminal cells obtuse or truncate; slender colorless rhizoids occasionally produced from the lower cells. On damp ground, among *Salicornia*, in a salt marsh, Alameda, California, Sept. 26, 1903, *W. J. V. Osterhout & N. L. Gardner*. Distributed as P. B.–A., No. 1284.

This plant forms a thin extended layer on ground covered only at the highest tides, and has the habit of a *Vaucheria*. The lower part is densely matted, the upper surface is formed by the free ends of the erect branches. These erect branches are fairly regular in form, varying from a true cylindrical shape about as do the filaments of a *Rhizoclonium*; the basal filaments, however, are very irregular, the cells varying from long and cylindrical to short and ovoid, or of a triangular section, the latter apparently where a branch is starting from a short cell; cells of larger and smaller diameters may alternate, or there may be a series of swollen cells, giving a moniliform appearance. Some of the filaments end in a large, ovoid cell, others taper to a slender, tortuous rhizoid. In many cases the first cross wall in a branch is quite a distance from the base, reminding one of *Siphonocladus*. The cell wall is quite thick; the color is a dull green. Although observed by Dr. Gardner for a long time, no indication of spores was seen.

Vaucheria longipes n. sp. Filamentis 80–90 μ diam., sparse et irregulariter ramosis; ramo sporifero, 30–40 μ diam., sub angulo recto exeunte, 1–6 mm. longo, antheridium terminale, cylindricum aut paulo attenuatum, hamatum vel circinatum sustinente; oogoniis 2–4, ovoideis, subobliquis, pedicellatis, 70–85 $\times$ 35–40 μ, antheridium superantibus; rostro 15 μ longo; pedicellis 100–150 μ longis, 20–30 μ diam., sub antheridio ortis.

Filaments 80–90 μ diam., oogonia and antheridia borne at the end of a branch 1–6 mm. long, 30–40 μ diam.; antheridium terminal, cylindrical or slightly tapering, hooked or circinate; oogonia 2–4, ovoid, somewhat oblique, pedicelled, 70–85 $\times$ 35–40 μ, usually surpassing the antheridium; pedicels 100–150 μ long, 20–30 μ diam., arising just below the antheridium; beak 15 μ long. In a ditch by the roadside, Ross Valley, California, Jan., 1904. *N. L. Gardner.*

Somewhat resembling *V. geminata*, but distinct by the very long fruiting branches, at right angles to the filaments, as well as by the more elongate oogonia, borne on longer pedicels.

V. Gardneri n. sp. Filamentis 50–70 μ diam., sparse ramosis, ramis sub angulo recto exeuntibus, non attenuatis; chromatophoris parvis; antheridiis plerumque solitariis, raro 2–4, et oogoniis 2–4, raro pluribus, pedicellatis, pedicellis basi connatis, 60–100 μ longis, 15–20 μ diam.; antheridii pedicello angulo recto vel subrecto posito; pedicellis oogoniorum circumcirca positis, sub angulo 45° exeuntibus; antheridio hamato vel circinato, ad 10 μ diam. attenuato; oogoniis plerumque sat obliquis, saepe introrsum concavis, 85–95 $\times$ 70–75 μ; plerumque antheridium superantibus; rostro circa 15 μ longo.

Filaments 50–70 μ diam., sparingly branched, branches issuing at a right angle, not tapering; chromatophores small; antheridia generally single, rarely 2–4; oogonia 2–4, rarely more; both pedicelled, pedicels connate at the base, 60–100 μ long, 15–20 μ diam.; pedicel of the antheridium at a right angle or nearly so; pedicels of the oogonia arranged around it at an angle of about 45°; antheridium hooked or circinate, tapering to 10 μ diam.; oogonia usually quite oblique, often concave on the inside, 85–95 $\times$ 70–75 μ; generally surpassing the antheridium; beak about 15 μ long. In a small pool, Mountain View Cemetery, Oakland, California, May 6, 1903; in a ditch by the roadside, Berkeley, California, April 15, 1905. *N. L. Gardner.* Distributed as P. B.–A., No. 1288.

Forma **tenuis** n. forma. Filamentis 30–40 μ diam.; oogoniis et antheridiis ut apud formam typicam, sed numeris variantibus; antheridiis haud infrequenter 2, oogoniis 1–5.

Filaments 30–40 μ diam., oogonia and antheridia as in the type, but in varying numbers; antheridia not infrequently 2, oogonia 1–5. In company with *V. longipes.*

This species is not unlike *V. longipes*, but the pedicels bearing the

organs of fructification are placed directly on the filament, radiating from one spot; the oogonia are much more oblique, often concave inside. When there are two oogonia and one antheridium, there is a certain resemblance to *V. geminata*; but the slender radiate pedicels make it amply distinct; the forms with many oogonia and antheridia are quite unlike anything else. The largest number of pedicels observed in one group is twelve; four bearing antheridia, eight oogonia.

Malden, Massachusetts.

Explanation of Plate 76.

Fig. 1, Vaucheria longipes.
Fig. 2, V. Gardneri, group of four oogonia and one antheridium.
Fig. 3, " " group of two " " " "

THREE PLANTS FROM MAINE.

Ora W. Knight.

During the fall of 1906 while collecting along the shore near Otter Cliffs, Mount Desert Island, I found a very peculiar form of *Juniperus horizontalis* Moench, with lobed fruit, growing in an extensive patch by itself, while elsewhere the typical plant prevailed. As this plant seems worthy of a name I propose to call it:—

Juniperus horizontalis Moench, forma **lobata**, forma nov.

Characters:— differs from *J. horizontalis* in having more elongate fruit which is strongly two-, three- or even four-lobed at the apex. The fruit when mature is pale green in color, slightly tinged with bluish, or occasionally pale greenish blue. Type locality: rocky cliffs along shore, Otter Cliffs, Mount Desert Island, Maine. Type No. 5311 O. W. K., October 3, 1906.

For two seasons I have had under observation a very peculiar hybrid *Pyrus* whose exact affinities were open to some slight doubt at first, but as the question now seems satisfactorily settled I propose to call it:—

Pyrus Americana × arbutifolia, comb. nov.[1]

[1] [Hybrids ascribed to the same parentage have been observed in cultivation. See, for example, Schneider, Ill. Handb. d. Laubholzk. i. 677.— Ed.]

Shrub about 1 meter tall; foliage very variable, glabrous above, pubescent beneath even when mature; the leaves either simple, oblong-ovate and dentate or entire, or variously lobed, or compound and composed of five to seven oblong-ovate leaflets with margins dentate or entire; peduncles and pedicels pubescent; cymes decompound, fifteen- to thirty-flowered, the flowers not appreciably different from those of *Pyrus Americana* (Marsh.) DC.; fruiting pedicels and young twigs pubescent; mature twigs glabrous, similar in color to those of *Pyrus Americana*; fruit only sparingly maturing, a majority of the blossoms not being fertilized, red, 6 mm. in diameter, not distinguishable externally from that of *Pyrus Americana*; the seeds very abortive, showing no embryos in the case of several examined. Fruit ripe and falling August 12, 1906. Type locality: growing associated with supposed parents, Bicycle Path, Bangor; flowering specimens June 9, 1905; fruit August 12, 1906. Type specimen No. 5224 O. W. K.

Along the shores of the Penobscot at Bangor, growing near the type of *Salix coactilis* Fernald, is a shrub, which at certain stages of growth I have been inclined to refer to *S. coactilis* although later in the season it more nearly resembles *S. cordata* Muhl. After study of this peculiar shrub for several seasons its true affinities seem well established and I propose to call it:—

Salix coactilis × **cordata,** hyb. nov.

Characters:— Shrub about 2 meters tall; branchlets reddish green to blackish and somewhat quadrangular; youngest branchlets gray and pubescent to puberulent; leaves oblong to lance-ovate, long-acuminate, petioled, at first reddish green to red beneath and pubescent, especially on mid-rib and veins, above deeper red, pubescent on the mid-rib at least, becoming green with age but always paler below and remaining pubescent on mid-ribs above and below, in maturity 6 to 12 cm. long, 2 to 4 cm. broad, rather finely and somewhat irregularly glandular-dentate; petioles pubescent even in maturity; stipules semi-ovate, glandular-toothed, persistent on the younger branchlets, 4 to 10 mm. long; aments on short leafy peduncles, expanding with the leaves, in anthesis 1 to 2.5 cm. long, in fruit 2 to 4 cm. long, 7 mm. thick; scales oblong or obovate, blunt at tip, blackish, very pubescent with silky hairs longer than blade; capsule glabrous, conic-subulate, pedicelled, about 3 mm. long, the pedicel about 1 mm. long; style about 1 mm. long; stigma short, two-lobed; capsules generally abor-

tive, but occasionally producing one or two fertile seed. Type locality: bank of Penobscot River, Bangor, May 16 and June 7, 1904. (No. 35 O. W. K. Type). In general appearance the plant is almost exactly intermediate between *S. cordata* and *S. coactilis*, the aments having a marked resemblance to those of *S. cordata*, while in other characters the shrub resembles *S. coactilis*.

Bangor, Maine.

SALICORNIA EUROPAEA AND ITS REPRESENTATIVES IN EASTERN AMERICA.

M. L. Fernald.

The annual Saltwort or Samphire of our salt marshes, which has passed very generally under the name *Salicornia herbacea*, presents, upon the coast of New England and eastern Canada, three strongly marked tendencies to which it is here proposed to call attention. But first we must consider briefly the nomenclatorial status of the species, which has been recently called to mind by Messrs. Britten and Rendle of the British Museum.[1]

Linnaeus, in the first edition of the Species Plantarum (1753), enumerated four species of *Salicornia*, with the first of which alone we are here concerned. This was

"1. SALICORNIA articulis apice crassioribus obtusis. *europaea*.
Mat. med. 8. herbacea.
Salicornia herbacea. *Fl. suec.* 1.
Salicornia annua. *Sauv. monsp.* 7.
Salicornia. *Hort. cliff.* 490. *Roy. lugdb.* 205.
β Salicornia semipervivens. *Sauv. monsp.* 7. fruticosa.
Kali geniculatum majus. *Bauh. pin.* 289.
Habitat in Europæ litoribus maritimis. ♄ ☉
Conferantur annua & sempervirens *utrum specie distincta*?" [2]

In the 2d edition (1763) of the Species, Linnaeus entirely discarded the name *Salicornia europaea* and published the name *S. herbacea* for

[1] Britten & Rendle, Journ. Bot. XLV. 104 (1907).
[2] L. Sp. 3 (1753).

the annual plant, setting off as a distinct species the perennial *S. fruticosa*. Subsequent authors have been inclined to follow the second edition of the Species instead of the first, and to designate the annual plant of both Europe and America as *S. herbacea* L. (1763).

The name *Salicornia europaea*, however, as shown not only by its position on the page but by its italic-type, was intended by Linnaeus, in 1753, to designate a species embracing two variations, one annual and herbaceous, the other evergreen and fruticose; and it must, of course, be retained for at least one of its components, although in 1763 Linnaeus himself discarded the name. In fact, in 1762, one year prior to the publication of the name *Salicornia herbacea*, the annual herbaceous plant was clearly treated by Hudson, in his Flora Anglica, as *S. europaea*, and several forms (including the fruticose plant) were indicated without names. Thus it is doubly certain that the herbaceous plant, clearly defined by Hudson in 1762 as *S. europaea*, should retain that name instead of the later *S. herbacea* of Linnaeus (1763).

The plant which is usually interpreted as typical *Salicornia europaea* (*S. herbacea*) is somewhat bushy-branched, with the ascending simple or commonly forking spikes comparatively slender (1.5–2.5 mm. thick). This plant is common on our Atlantic coast, from eastern New Brunswick to Georgia, and it occurs in alkaline places in the interior of New Brunswick and New York, also on the Pacific coast.

Another plant, differing somewhat from the typical *Salicornia europaea* in having the elongate spikes much thicker (3–4.5 mm. thick) and more commonly simple or subsimple, is represented in the herbaria examined by several sheets from the coast of New Brunswick, Nova Scotia, and New England, and from Salina, New York; and it is apparently of wide distribution. This thick-spiked extreme seems to be the plant described by Koch as *S. herbacea, β pachystachya*.

The third plant is more distinct from the upright bushy-branched *Salicornia europaea*, for its freely-forking branches are very lax and often drooping, the lowermost commonly much elongated and quite prostrate upon the ground. The plant, thus forming closely prostrate or loosely spreading mats, is the characteristic representative of the species about the mouth of the River St. Lawrence, and from there it follows the coastal marshes southward as far as the entrance to the Bay of Fundy. It also occurs in alkaline places in the Saskatchewan region. This plant is identical with much Old World material which is considered without question to be *S. prostrata* Pallas. In its best

development it appears sufficiently distinct from *S. europaea*, but the distinctions seem to be merely habital, and no characters of flower or fruit have been found by which it can be separated from the upright plant.

A fourth plant, known from the Valley of the Red River of the North in Minnesota and Manitoba to central Kansas and the Rocky Mountains, should be watched for in alkaline regions farther east. This is the recently described *Salicornia rubra* Nelson, which resembles typical *S. europaea*, but is easily separated by the shorter joints of the spikes.

The distinctions and nomenclature of these four annual plants with blunt or bluntish inconspicuous scales may be summarized as follows.

* Joints much longer than thick, conspicuously exceeding the middle flower.

S. EUROPAEA L. Erect (1–4.5 dm. high), from simple to freely branched, the *branches ascending*, green, turning red in autumn; scales obscure and very blunt, making a truncate barely emarginate termination of the long joints of the *slender* (1.5–2.5 *mm. thick*) tapering *spikes*; *middle flower* much higher than the lateral ones, *shorter than the joint*; fruit pubescent; seed 1.3–2 mm. long.— Sp. 3 (1753); Huds. Fl. Angl. 1 (1762); Britten & Rendle, Journ. Bot. XLV. 104 (1907). *S. europaea* (*herbacea*) L. Sp. 3 (1753). *S. herbacea* L. Sp. ed. 2, 5 (1763); and most later authors.— Salt marshes of the coast, New Brunswick to Georgia; interior salt springs, etc., New Brunswick and New York; also on the Pacific coast. (Eurasia.)

Var. **pachystachya** (Koch) n. comb. *Spikes much thicker* (3–4.5 *mm. thick*).— *S. herbacea*, *β pachystachya* Koch, Syn. ed. 2, 693 (1844). — Similar range, less common.

Var. **prostrata** (Pallas) n. comb. *Branches horizontally spreading or drooping*, very soft and lax, the *lowest much elongated and decumbent*; or the whole plant depressed and matted.— *S. prostrata* Pallas, Ill. Pl. 8, t. 3 (1803). *S. herbacea*, *β prostrata* Moq., Chenop. Enum. 115 (1840). – Brackish or alkaline shores, Lower St. Lawrence River to Washington County, Maine.

* * Joints about as thick as long, scarcely exceeding the middle flower.

S. RUBRA Nelson. Bushy-branched (0.5–2 dm. high), the abundant simple or forking branches ascending, turning red in autumn; scales broadly triangular, blunt or subacute; spikes slender-cylindric (2–3.5 mm. thick), blunt, rather closely jointed; flowers crowded, the middle

one higher than the others and usually reaching the tips of the joints; fruit pubescent; seed 1 mm. long.— Bull. Torr. Bot. Cl. xxvi. 122 (1899).— Low alkaline places, Manitoba and western Minnesota to central Kansas, and westward to the Rocky Mts.

Gray Herbarium.

NOTES ON PLANTS OF CHESTERVILLE, MAINE.

Lillian O. Eaton.

In addition to the interesting plants of Chesterville already reported[1], the following, perhaps worthy of note, have been found in this vicinity, during the past few seasons. The grasses and sedges were collected and determined by Mrs. Agnes Chase of the Department of Agriculture at Washington, in the summer of 1906; the remaining plants, unless otherwise stated, being the collections of the writer. For aid in final identification of various species I am indebted to Dr. D. W. Fellows, Mr. A. A. Eaton, and Professor M. L. Fernald.

Oxalis Acetosella L., var. *subpurpurascens* DC. A few plants of this variety were found in a cedar swamp, among a thick colony of the species, by Mrs. Chase and the writer, July 3, 1906. The variety differed from the typical *O. Acetosella* only in a whitish appearance of the foliage and in the color of the petals, the latter being wholly a purplish-pink. After identifying the plants, Mr. Fernald writes: "I have known this variety in America only from Manchester, Vermont."

Lysimachia thyrsiflora L. Fence-row, in damp soil, July, 1906 (*F. J. Keyes*).

Sabbatia campestris Nutt. A single well flowered plant was found, September, 1906, on ground left fallow for a season.

Spiranthes Romanzoffiana Cham. Roadside ditch, August, 1906. Also found in a field, August 14, 1902, by C. H. Knowlton (See Ames, Orchidaceae, fasc. i. 139).

Scheuchzeria palustris L. Abundant on one bog, August, 1904.

Carex pauciflora Lightf. Plentiful on two bogs, July and August, 1904.

[1] Rhodora, ii. 123; v. 82.

Carex Backii Boott (*C. durifolia* Bailey).
Glyceria nervata Trin., var. *stricta* Scribn.
Panicum Werneri Scribn.
" *tennesseense* Ashe.
Phegopteris hexagonoptera Fée. A large colony on a shaded hillside, July, 1905.
Aspidium spinulosum Swartz (typical). On a rocky hill in partial shade, the plants evidently increasing.

South Chesterville, Maine.

The Dwarf Mistletoe on the Southeastern Coast of Maine. — The recent articles calling attention to *Arceuthobium pusillum* at different points in Maine prompt this note, supplementing the series of Maine records.

The plant first came to my attention during July, 1902, at West Jonesport, occurring rarely on Black Spruce, on the main land. Late in July, 1904, at Cross Island, off the mouth of Machias Bay, the plant was found in great profusion, again on Black Spruce. Here it infested patches of limited extent, with larger patches free from infection.

On Matinicus Island, off the coast of Maine, on August 4th, 1907, this plant was found in greater abundance and size than I have seen it previously. It infested the small, exceedingly dense or "scrubby" White Spruces about the Northwest Head.

I have often looked, vainly, for it about Casco Bay, yet we are now warranted in considering that it has been shown to occur throughout the northern, central, and eastern portions of the State.[1] The regularity of its distribution is another question, deserving of many reports. — Arthur H. Norton, Portland, Me.

[1] The following records are to be found in Rhodora.
Vol. ii. 2 (1900): *von Schrenk* — Monhegan Island, Boothbay, Linekin.
10 (1900): *Fernald* — Fort Kent, Upsala.
221 (1900): *Arthur* — Isle au Haut.
Vol. v. 49 (1903): *Harvey* — Mt. Katahdin.
Vol. viii. 168 (1906): *Chamberlain* — Pleasant Ridge.
Vol. xi. 28 (1907): *Murdoch* — Rangeley.
75 (1907): *Rand* — Mt. Desert Island.
124 (1907): *Chamberlain* — Norway — Casco.
[*Arceuthobium* is also found in Alton and Georgetown — Eds.]

Vol. 9, No. 105, including pages 149–196 was issued 13 September, 1907.

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Fig. 1. Vaucheria longipes. Figs. 2–3. V. Gardneri.

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